



Governmental Public Health:

An Overview of State and Local
Public Health Agencies

BACKGROUND
PAPER NO. 77

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OVERVIEW — *The Patient Protection and Affordable Care Act significantly expands federal support for community prevention and public health. This paper describes the governmental public health infrastructure at both the state and local level in terms of organizational structure, activities, financing, workforce, partnerships, and performance improvement efforts.*

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During the health care reform debate of the 111th Congress, policymakers often called for more and better efforts to prevent disease and promote health in order to contain the cost of health care services. While not as highly visible or as fully developed as the policy changes related to insurance coverage expansions, numerous provisions within the Patient Protection and Affordable Care Act (PPACA) are focused on reducing the nation's underlying burden of disease through enhanced prevention. Many of these provisions seek to increase patients' access to certain clinical preventive services commonly offered by health care providers (like immunizations) by improving coverage for these services under Medicaid, Medicare, and new private health plans. Other provisions (such as the creation of the Prevention and Public Health Fund; the establishment of the National Prevention, Health Promotion, and Public Health Council; and the creation of Community Transformation Grants) promise to dramatically expand federal engagement in and support for population-based interventions designed to facilitate healthy behaviors and environments.

These policy developments have the potential to significantly reorient the public health system. Although the future allocation of Prevention and Public Health Fund investments remains uncertain, nearly half of the \$500 million made available in fiscal year (FY) 2010 has been committed to community-based prevention, development of the public health infrastructure, and training for the public health workforce.¹ Foreshadowed by the Communities Putting Prevention to Work (CPPW) grants included in the American Recovery and Reinvestment Act of 2009, these community-based and capacity-building investments represent both challenges and opportunities for a thinly stretched governmental public health infrastructure.

Historically, despite being integral components of public health, health promotion and chronic disease prevention have generally received limited attention from governmental public health agencies,

particularly those at the local level.² Over the last decade, concerns related to public health emergencies, such as the H1N1 influenza pandemic and threats of bioterrorism, focused policymakers' attention on public health infrastructure needs, precipitating an infusion of resources that has strengthened public health capacity in a variety of ways. However, these investments largely targeted revitalization of services, such as communicable disease surveillance, that fall firmly within the traditional purview of governmental public health departments. It is unclear if these efforts have also significantly improved the capacity of governmental public health agencies to address the more common and persistent health threats, such as obesity, diabetes, hypertension, injuries, and mental illness.³

Linked to a range of complex, interrelated factors that are deeply engrained in this country's societal fabric, these prevalent forms of disease and disability represent a different kind of public health challenge. In 1988, the magnitude and import of this challenge was outlined in the Institute of Medicine's (IOM's) landmark report "The Future of Public Health."⁴ An IOM report published in 2002 reiterated these issues, finding that inadequate progress had been made in reforming the public health system to address contemporary and emerging threats to population health.⁵

For many policymakers, concerns regarding public health capacity are familiar, yet the public health system remains somewhat nebulous. Perhaps this is not surprising, given that (i) few people realize that they have direct interactions with governmental public health departments, (ii) the system is both multifaceted and highly variable across the nation, and (iii) the data available to characterize this complexity are limited.

Those charged with oversight of PPACA's public health provisions must address these challenges in order to clearly identify capacity development needs, effectively target and track infrastructure investments, and accurately assess progress towards implementation. Greater familiarity with the major features of the existing public health system will aid the design and development of future accountability mechanisms. To that end, this paper describes the governmental public health infrastructure, focusing on state and local public health agencies—their role, organizational structure, activities, financing, workforce, partnerships, and performance improvement efforts.

WHAT IS PUBLIC HEALTH?

The IOM has defined the mission of public health as “fulfilling society’s interest in assuring conditions in which people can be healthy” and the substance of public health as “organized community efforts aimed at the prevention of disease and the promotion of health.”⁶ These definitions are intentionally broad and encompass the interventions of a wide variety of public and private-sector entities.

The definitions provided by the IOM clearly indicate that public health is not synonymous with the activities of governmental public health agencies, but such agencies are charged with the unique role of ensuring that the mission of public health is adequately addressed. This role is further defined by three core functions: assessment, policy development, and assurance. Building on the IOM’s definitional construct, the U.S. Department of Health and Human Services’ Public Health Functions Steering Committee⁷ identified ten essential services of public health (see Figure 1, next page) which were intended to provide a working definition of public health. The ten essential services definition also assumes public-private partnership and does not prescribe the services to be provided by governmental public health agencies.

The three core functions of public health are assessment, policy development, and assurance.

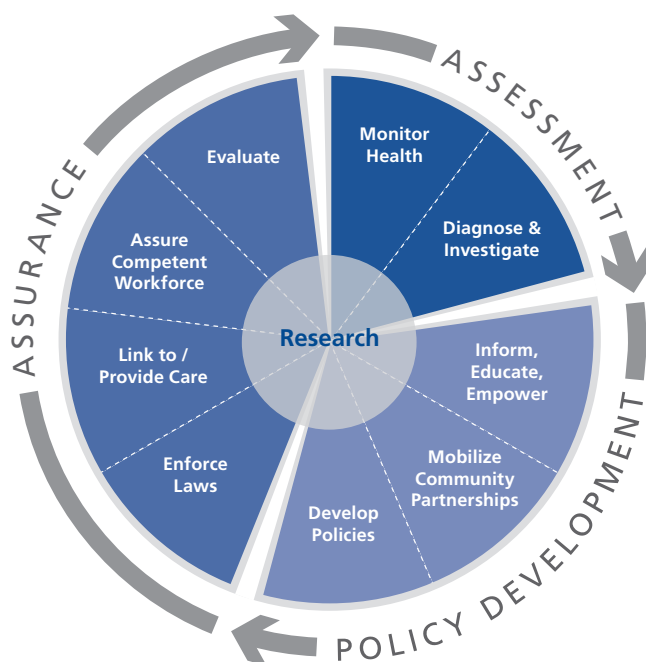
Governmental public health agencies at the federal, state, and local levels are sometimes referred to as the “backbone” of the public health system. Under the collaborative model described above, these governmental public health agencies may be directly responsible for many public health activities, but partnerships between public health agencies at multiple levels of government and with other organizations (both public and private) are also needed to achieve the wide-ranging mission of public health. Ideally, governmental public health agencies should work closely with other units of government whose missions influence but are not focused on health-related goals, as well as with a diverse array of private-sector organizations that affect population health, such as academic institutions, health care providers, insurers, public health institutes, advocacy groups, charities, faith-based organizations, private foundations, media outlets, and businesses.

This collaborative approach to public health may be an optimal conceptualization for improving population health, but it does not provide clear boundaries for the relative roles and responsibilities of the various organizations involved in its implementation. Although

generally accepted by public health professionals, these broad definitions of public health are open to interpretation and were crafted to encompass the range of actors and interventions observable in public health practice.

The extent to which government assumes direct responsibility for the essential services and the manner in which these governmental activities are organized and implemented is highly variable across states and localities. Policymakers may not understand or embrace an expansive definition of public health and often focus their attention more narrowly on the activities directly conducted by governmental agencies. While neither the IOM nor the ten essential

FIGURE 1 | The Three Core Functions and Ten Essential Services of Public Health



Source: Adapted from Public Health Functions Steering Committee, "Public Health in America," 1994; available at www.health.gov/phfunctions/public.htm.

1. **Monitor** health status to identify community health problems.
2. **Diagnose and investigate** health problems and health hazards in the community.
3. **Inform, educate, and empower** people about health issues.
4. **Mobilize** community partnerships to identify and solve health problems.
5. **Develop policies and plans** that support individual and community health efforts.
6. **Enforce** laws and regulations that protect health and ensure safety.
7. **Link** people to needed personal health services and assure the provision of health care when otherwise unavailable.
8. **Assure** a competent public health and personal healthcare workforce.
9. **Evaluate** effectiveness, accessibility, and quality of personal and population-based health services.
10. **Research** for new insights and innovative solutions to health problems.

services definitions identify the types of problems or hazards that threaten health outcomes, government involvement in public health interventions has often been determined by (and organized around) specific threats to population health.

Although this paper concentrates on governmental public health agencies at the state and local levels, this emphasis is not intended to minimize the contributions of federal agencies, units of government that are not dedicated to health-related issues, or the private sector. (See the text box at right for a brief overview of federal public health agencies.) A comprehensive summary of public health activities at the federal level is beyond the scope of this paper and is available from other sources.⁸ In contrast, the nature and magnitude of contributions from both the private sector and nonhealth government agencies are not well documented.

ORGANIZATION OF STATE AND LOCAL PUBLIC HEALTH AGENCIES

The nature of governmental public health agencies at the state and local levels varies considerably across the country. Legally and traditionally, states are the primary authorities for public health. States have wide latitude in defining this authority through statute, determining the breadth and depth of government services to be provided and establishing the manner in which these services will be organized, financed, and delivered.

Federal policies influence but generally do not dictate state and local public health practices. Federal policymakers have sometimes

Federal Public Health Agencies

Federal public health functions are generally housed within the Department of Health and Human Services (HHS), but a wide variety of federal agencies engage in regulatory activities, research, education, and other types of interventions that affect the public's health. Examples include the Department of Agriculture, the Environmental Protection Agency, the Department of Transportation's National Highway Traffic Safety Administration, and the Department of Labor's Occupational Safety and Health Administration.

Federal funds for the public health infrastructure at the state and local level primarily flow through HHS, most prominently through the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration, the Substance Abuse and Mental Health Services Administration, the Office of the Assistant Secretary for Preparedness and Response, and (to a more limited extent) the Food and Drug Administration and the Centers for Medicare & Medicaid Services. CDC administers funding for many population-based prevention services that are distributed through more than 30 grants or cooperative agreements. Most programs are focused on specific diseases or risks, and funds are usually awarded to state health agencies. However, in some cases, funding may be provided to other state agencies, such as the department of education. Some awards to states are determined by a per capita formula; others are made on a competitive basis. Under some programs, such as the Healthy Communities Program (formerly known as the Steps Program) and the REACH program, CDC may award grants directly to local health agencies and private-sector organizations.

Beyond funding, CDC and other HHS agencies provide a variety of other resources to state and local health departments, including expert consultation, training, technical assistance, and tools to facilitate public health practice. HHS agencies also support research and dissemination activities that contribute to the scientific evidence base available to guide public health practice.

Each of the 50 states and the District of Columbia have established a state health agency that serves as the locus of state governmental public health activity.

sought to foster consistency in public health programs across states, largely through requirements tied to grant funding. However, the program-specific nature of federal grants has typically limited standardization efforts to narrowly defined practices, such as data definitions, program elements, and laboratory protocols. Such program requirements do not prescribe the overall scope and organization of public health activities.

The broad flexibility states have in defining their public health role has led to a highly varied and somewhat fragmented governmental public health infrastructure throughout the nation. Despite this heterogeneity, the following narrative broadly describes governmental public health in the United States, while noting important variations.

Each of the 50 states and the District of Columbia have established a state health agency that serves as the locus of state governmental public health activity. In most states (55 percent), the health agency is an independent agency. Some of these independent health agencies focus exclusively on public health, while others include additional health care–related responsibilities, such as administration of Medicaid. In 45 percent of states, the state health agency is a component of a broad umbrella or super agency that includes a wide mix of functions, such as social services, long-term care, or insurance regulation, in addition to traditional public health functions.

As a result, the scope of functions incorporated into the state health agency can vary widely. In any given state, most public health functions are managed by the state health agency, but certain public health duties may be assumed by a sister agency in state government. Functions sometimes administered outside of the state health agency include the regulation and inspection of hospitals and other types of health care facilities, the licensure of health professionals, the control of disease vectors (such as mosquitoes and rodents), and the regulation of indoor air quality. These organizational differences create challenges for collecting consistent descriptive data regarding the nature of governmental public health and the resources devoted to it.

Further complicating characterization efforts are the variety of organizational models states have adopted for governing their relationship with public health agencies at the local level. As described in the text box on state-local relationships and Figure 2 (next page), these organizational relationships can be characterized as centralized, decentralized, or hybrid models. However, even under the most decentralized

- Twenty-nine states (58 percent) have established a **decentralized** organizational model for public health in which local public health agencies are organizationally independent of the state agency and are primarily governed by local authorities.
- Six states (12 percent) have a **centralized** organizational structure in which state government directly governs and operates local public health agencies.
- Thirteen states (26 percent) operate under a **hybrid** model in which some local jurisdictions operate decentralized local public health agencies (most typically in metropolitan areas), while state agencies assume responsibility for certain public health activities in jurisdictions that lack a local health department.
- Two geographically compact states, Hawaii and Rhode Island, (4 percent) do not have local public health agencies and provide all public health services through state agencies.

- Source: National Association of County and City Health Officials, 2008 National Profile of Local Health Departments, July 2009, p. 11; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.

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models, states may retain direct control over specific functions rather than delegate these activities to local officials.

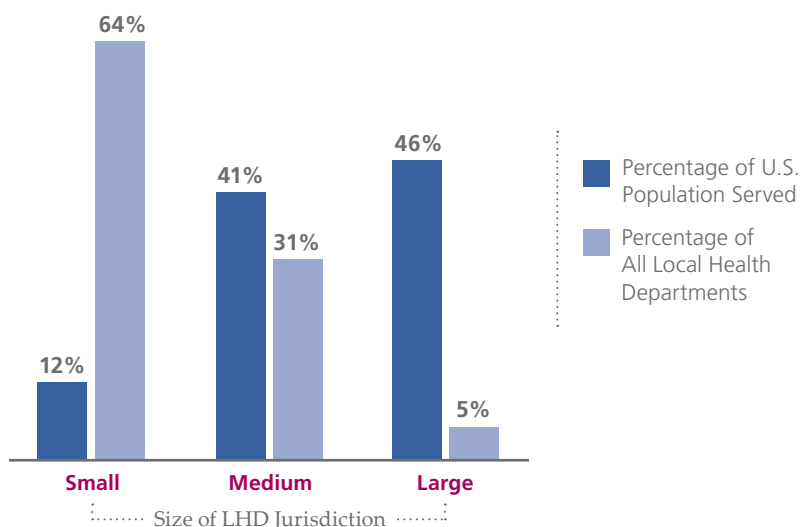
Whether administered by local or state government, local public health agencies usually have direct operational responsibility for providing many, if not most, of the public health services available within a given jurisdiction. Although nearly all U.S. residents are served by a local health department, the capacities of these local agencies and the services they provide vary dramatically.

Local health departments serve jurisdictions of different types and sizes. Of the 2,794 local health departments in the United States, most (60 percent) serve counties; some (18 percent) serve a city, town, or township; some (11 percent) serve a joint city/county jurisdiction; and some (9 percent) serve a multicounty region.⁹ As shown in Figure 3, most local health agencies (64 percent) serve jurisdictions with small populations (under 50,000 people). However, nearly half of the U.S.

population receives public health services from the 140 local health departments that serve large jurisdictions (500,000 or more people).

Do organizational differences influence public health performance? Public health experts have long speculated that such differences might affect the efficiency and effectiveness of public health agencies, but these issues have not been studied extensively. Limited evidence suggests that jurisdiction size has a strong positive correlation with local public health system performance (as self-assessed by a sample of local health officials using a standardized instrument).¹⁰ The factors driving this association are unclear; possible explanations include economies of scale and scope for large local public health agencies, a relationship between volume and effectiveness for some services, and a

FIGURE 3 Percentages of U.S. Population Served and Percentages of Local Health Departments (LHDs), by Size of LHD Jurisdiction



Small = < 50,000 persons
Medium = 50,000 – 499,000 persons
Large = 500,000+ persons

Note: n = 2,794. Due to rounding, percentages do not add to 100.

Source: National Association of County and City Health Officials, 2008 National Profile of Local Health Departments, July 2009, p. 10; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.

wider range of private-sector partner organizations contributing to public health activities in larger jurisdictions.

PUBLIC HEALTH ACTIVITIES

It is difficult to clearly identify which public health activities are typically conducted at the state or at the local level or to delineate how these responsibilities are distributed between state and local agencies, given the range of organizational models that have been adopted and the variations in public health authorities defined in state law. The following provides a broad generalization of state and local public health activities.

State Public Health Agencies

State agencies typically play a role in managing the activities of local health departments and are also directly responsible for implementing certain programs.

Disease surveillance, epidemiology, and data collection—State health agencies are generally responsible for compiling large data sets of health-related information, reviewing these data for trends, and investigating anomalous or alarming disease patterns. Examples of the health-related data collected, maintained, and analyzed by state government include vital statistics records (such as births and deaths), communicable or infectious disease reports, surveys of behavioral risk factors, cancer registries, childhood immunization registries, hospital discharge databases, and trauma registries.

Historically, states' surveillance and epidemiology efforts were focused exclusively on infectious disease. However, epidemiological activities related to chronic diseases, cancer, environmental threats, and perinatal health have increased substantially in recent years,¹¹ and the majority of states are now engaged in these activities. The types of data routinely collected vary by state, as do the level and sophistication of analytic and epidemiologic capacities. State health agencies typically work cooperatively with the Centers for Disease Control and Prevention (CDC) in implementing surveillance activities to allow for valid aggregation across states. However, these efforts have not eliminated methodological variation across (and sometimes within) states. Local health departments may be actively involved in collecting some types of surveillance data, such as reports of communicable disease.

Many large local health departments have surveillance and epidemiology capacity that is comparable to and may even exceed that of the state health department.

Laboratory services—Laboratories are a critical adjunct to many disease surveillance activities. While private clinical laboratories contribute relevant diagnostic test results to surveillance systems, state public health laboratories are primarily responsible for much of the sophisticated testing needed to monitor population health.

State government plays a pivotal role in planning for public health emergencies.

Activities typically performed by state labs include screening newborns for rare genetic abnormalities, testing for possible bioterrorism or emerging infectious agents (such as anthrax or West Nile virus), testing for food-borne illness, typing influenza virus strains, screening children for lead exposure, screening people for exposure to environmental toxins, and testing environmental samples for toxic contaminants.

In some cases, state public health labs may confirm the results of private laboratories but, more often, state laboratories are responsible for testing that private labs are unable or unwilling to perform. In certain circumstances, laboratory samples are further referred to the CDC for additional testing and confirmation. Some local health departments also provide laboratory-based services. While local laboratories are most typically used for clinical purposes, some large local health departments conduct specialized public health laboratory testing.

Preparedness and response to public health emergencies—State government plays a pivotal role in planning for public health emergencies. The attention and resources devoted to these activities have increased dramatically since the anthrax attacks in 2001. Preparedness and response efforts encompass a wide range of responsibilities, including specialized disease surveillance, laboratory testing, outbreak investigation, mass prophylaxis, quarantine and isolation, and coordination of emergency medical response. States coordinate these activities with the CDC and the Office of the Assistant Secretary for Preparedness and Response. States typically coordinate with local health agencies in developing preparedness plans and often rely on local agencies to implement response activities.

Population-based primary prevention—Most states sponsor some type of population-based health promotion or disease prevention activity.

Efforts related to HIV/AIDs, tobacco, injuries, and unintended pregnancy are most common, but prevention initiatives related to obesity, substance abuse, and violence are also fairly prevalent. These population-based activities are diverse, including media campaigns, outreach to high-risk groups, development of educational materials, and policy change initiatives. The strength and scale of these efforts vary significantly across states, and the engagement of local agencies is also highly variable. While a comprehensive inventory of states' primary prevention activities has not been conducted, examples of promising models have been documented. For example, the National Association of Chronic Disease Directors has compiled a summary of successful efforts reported by state officials.¹² This compilation does not focus exclusively on primary prevention, as a variety of chronic disease management initiatives are included. Similarly, the CDC has highlighted best practice models developed by states and organized around the major disease- or risk-focused grant programs funded by the CDC.¹³

Population-based primary prevention activities are diverse, and the strength and scale of these efforts vary.

Health care services—State governments are not usually directly responsible for delivering health care services to individuals. Notable exceptions include state mental health facilities, services for children with special health needs, treatment services for certain communicable diseases (such as HIV/AIDs and tuberculosis), and correctional health. Most states (86 percent) provide mental health services through an agency other than the state health agency, but services for children with special health needs and communicable disease services are usually administered by the state health agency. States often rely on local health departments to provide these clinical services. Approximately 24 percent of state health agencies are responsible for health services in correctional facilities.

Most state health agencies play a lead role in monitoring health care services provided by the private-sector delivery system, such as managing trauma systems, sponsoring health planning boards that administer certificate of need programs, and coordinating emergency response. States typically play a role in monitoring the adequacy of health care resources, identifying underserved areas and populations, and may seek to improve access to health care providers through state-sponsored grant, scholarship, and student loan repayment programs. These access improvement programs are sometimes

focused on particular populations, such as rural residents or minority groups, or certain services, such as oral health.

Regulation of health care providers—State governments are typically responsible for inspecting and licensing health care professionals and facilities. However, in most states (about 80 percent), these activities

are not conducted by the state health agency and are instead carried out by a sister agency within state government. About one-third of local health agencies play a role in implementing this type of regulatory responsibility. States may also engage in other work to improve the quality of clinical services, apart from licensure and inspection, such as providing technical assistance and other resources to health care providers

and developing and publishing quality report cards that measure the performance of providers or insurance plans.

Other regulatory activities—Most state health departments play a role in inspecting and licensing food processing facilities, solid waste removal services, and sometimes jails and prisons.

Environmental health—States are responsible for a wide range of activities aimed at detecting and remediating environmental health threats, such as contaminated food and water, radon gas, mosquitoes and other disease vectors, and chemical spills. In many states, an environmental agency, not the state health department, is responsible for administering these types of activities, and the conduct of such work is often delegated to local agencies.

Administration of federal public health programs—In implementing these activities, states manage a broad range of public health funding streams and programs sponsored by the federal government. Examples include the Preventive Health and Health Services block grant, the Public Health Emergency Preparedness grant, the Hospital Preparedness grant, the Maternal and Child Health block grant, the Women, Infants, and Children (WIC) program, the Vaccines for Children and the Section 317 immunization programs, the AIDS Drug Assistance Program (ADAP), and the Health Resources and Services Administration's health professional shortage designations. Although local public health agencies may be directly responsible for delivering many of the services associated with these federal programs, state government

In about 80 percent of states, inspection and licensure of health care professionals and facilities is not carried out by the state health agency, but by a sister agency within state government.

usually establishes policies for program operations, allocates funds across local jurisdictions, coordinates regional activities, and oversees program performance and fiscal integrity.

Local Public Health Agencies

While the scope of public health authority at the local level is generally dictated by state policy, local policymakers have flexibility in determining what and how activities will be conducted by locally managed departments. Therefore, the services provided by local public health agencies vary both within and among states. Local health departments in large, metropolitan areas typically have a broad range of functional capacities similar to and, in some cases, more developed than those of state health agencies. In contrast, small local health departments are often responsible for a narrow set of public health activities.

Most local public health departments engage in multiple activities that include both personal and population-based services.¹⁴ Services most commonly provided include the following:

Clinical prevention—Most local health departments provide some type of clinical preventive service. Adult and child immunizations (provided by 88 percent and 86 percent of local health departments, respectively) and screenings for communicable diseases, such as tuberculosis (81 percent), are the types of clinical preventive services most widely available through local health agencies. Less commonly available are screenings for diabetes (provided by only 45 percent), cancer (by 42 percent), and cardiovascular disease (by 35 percent).

Medical treatment and other personal care services—Certain kinds of treatment services are commonly available through local health departments. Relatively few local health departments (11 percent) provide comprehensive primary health care services, but most provide treatment for communicable diseases, such as tuberculosis (72 percent) and sexually transmitted diseases (57 percent). Services for maternal and child health, such as perinatal home visitation (63 percent), well child clinics (41 percent), developmental screening (44 percent), and WIC nutrition counseling services (62 percent), are also offered by many local agencies. These maternal and child health services are typically restricted to high-risk populations,

such as low-income families and mothers and children with special health care needs, and often are not widely available through private health care providers.

Population-based interventions—Population-based services most frequently provided by local public health agencies include influenza pandemic planning (89 percent), communicable disease surveillance (88 percent), environmental health surveillance (75 percent), inspection of food service establishments (77 percent), inspection of schools and day care facilities (68 percent), and tobacco prevention (70 percent). Some local health departments are engaged in primary prevention activities directed at chronic

disease (53 percent), physical activity (53 percent), and injuries (39 percent), but these activities are usually conducted in partnership with nongovernmental organizations, other units of local government, or state health agencies.

Larger local public health departments tend to provide a more comprehensive set of services, while smaller agencies are likely to engage in a more limited set of activities. For example, while 82 percent of large local health departments conduct screening for HIV/AIDs, only 50 percent of small agencies and 75 percent of medium agencies offer such services.¹⁵ Similarly, fewer than half of small agencies offer primary prevention programs for chronic diseases, compared to about 60 percent of medium-sized agencies and 80 percent of large agencies.

It is important to remember that community public health services are not restricted to local public health agencies. For example, more than 90 percent of the jurisdictions served by local health departments have access to government-sponsored environmental health services, such as vector control, ground water protection, radiation control, and hazardous material response. Yet such services are frequently provided by either a sister agency at the local level or by a state-level agency, rather than by the local health department. Private-sector organizations may also engage in public health activities related to prevention and wellness. However, the contributions of these public and private partners are not well documented.

Larger local public health departments tend to provide a more comprehensive set of services, while smaller agencies are likely to engage in a more limited set of activities.

FINANCING

Comparative assessments of public health financing across jurisdictions are undermined by variations in organizational structure and scope of services, as well as inconsistent standards regarding what activities “should” be included in estimates of public health funding. Much of the financial data presented below are based solely on the expenditures of state and local health departments. Except where noted, these data generally do not control for variations in structure or service scope, account for the transfer of funds across levels of government, or adjust for regional differences in wages and other input costs. Although the impact of these data limitations is unclear,¹⁶ caution should be exercised in interpreting differences in the level and sources of public health financing.

States rely heavily on federal funding to support their state health agencies, but the degree of dependence varies by state. The average state health agency receives 50 percent of its funding from federal grants, cooperative agreements, and contracts; 24 percent from state funds; and the remainder from fees, Medicaid and Medicare, and other forms of revenue. However, this average masks important variation among states. Some state health agencies receive over 80 percent of their total funds from federal grants, while others receive 56 percent of their dollars from the state government.¹⁷ These proportional differences reflect wide variations in the scope of services included in state health department budgets, as well as variation in both the level of resources devoted to public health activities by state government and, to some extent, the distribution of federal grant dollars.

Trust for America’s Health has found high levels of variation in state spending on public health, even after controlling for significant differences in service scope. In FY 2009, median public health spending by states was \$28.92 per capita, with per capita expenditures ranging from \$3.55 in Nevada to \$169.92 in Hawaii.¹⁸

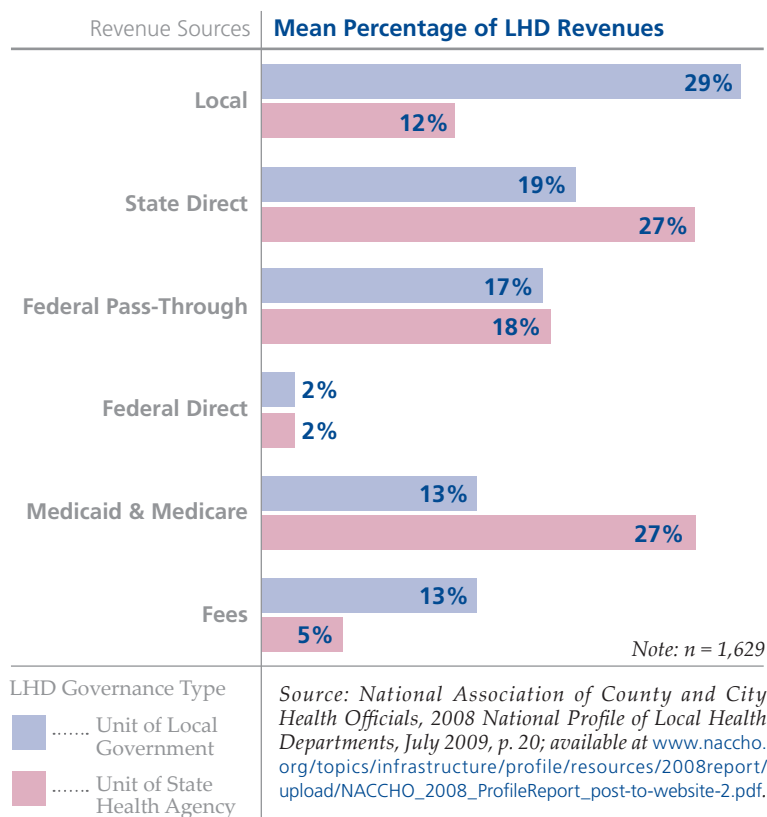
FY 2009 State Public Health Budgets

The recent economic downturn has had a significant impact on most state public health budgets. State health agency funding in FY 2009 decreased substantially from FY 2008 funding levels, dropping by nearly \$392 million, or 3.4 percent of total state public health agency spending. The Association of State and Territorial Health Officials reports that 76 percent of states made cuts to their FY 2009 public health budgets during 2009. In response, many states (74 percent) were reducing services, decreasing staff through attrition (74 percent), eliminating entire programs (39 percent), and reducing staff through layoffs (24 percent). Programs related to health promotion, disease-specific interventions (such as heart disease and Alzheimer’s disease), and laboratory services were the most common targets of budget cuts.

Source: Association of State and Territorial Health Officials, “Job and Program Cuts Accelerate, Threaten the Public’s Health”; available at www.astho.org/Display/AssetDisplay.aspx?id=2780.

State funding and federal funding “passed through” state agencies are important to local health agency financing, but local jurisdictions also supply significant financial resources. As shown in Figure 4, local funds tend to be a less significant revenue source for local health agencies operated as units of state government. Several southeastern states use this type of centralized model, and local health agencies in this region also continue to play a significant role in delivering health care services. This association may explain the greater reliance on Medicaid and Medicare by local health agencies operated as a unit of state government. However, even in such centralized states, local funds remain a nontrivial source of revenue for local health agencies.

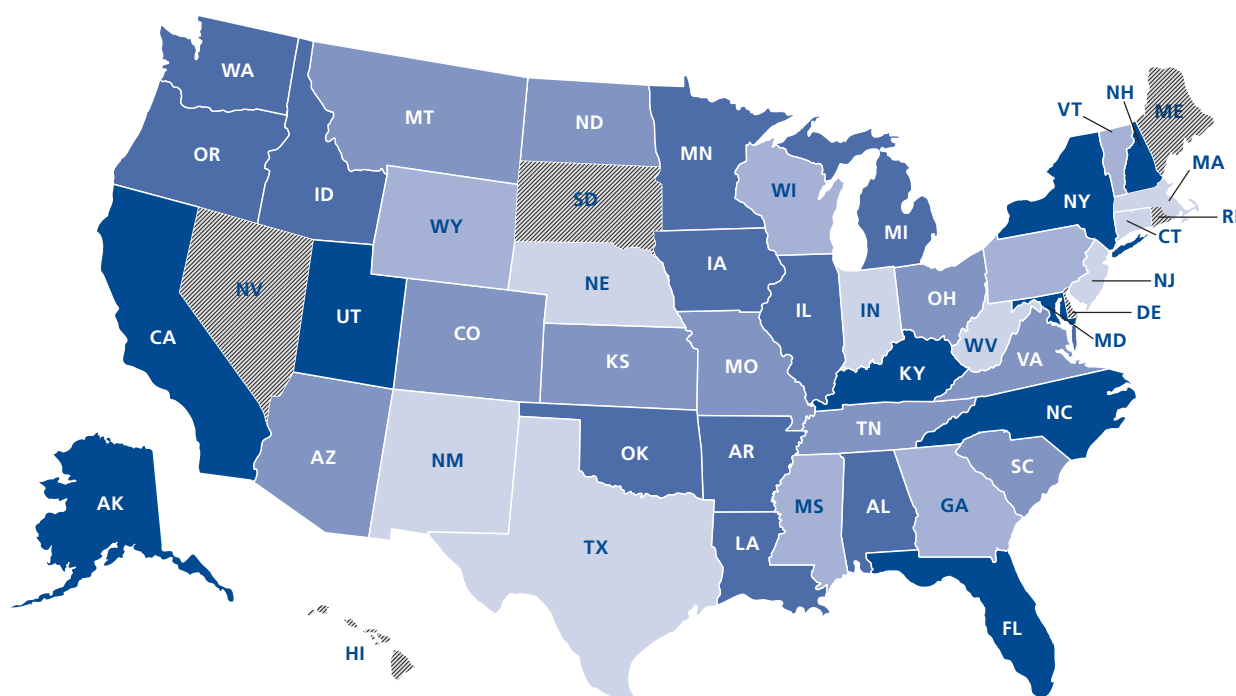
FIGURE 4
Mean Percentage of Local Health Department (LHD) Revenues from Selected Sources, by LHD Governance Type, 2008



Geographic variation in local health agency spending is substantial. As shown in Figure 5 (page 19), per capita spending by local health departments varies significantly across states. Nine states have median spending levels of \$20.00 or less per capita, while ten states have median spending levels of \$50.00 or more per capita.¹⁹ A lack of aggregate, unduplicated data on combined state and local spending makes regional variations in public health funding difficult to interpret, but the magnitude of these variations suggests an uneven distribution of public health resources at the local level.

Available financial data do not provide a clear picture of the current allocation of funds across public health activities. Dated estimates suggest that approximately two-thirds of state-level public spending was devoted to personal health care services.²⁰ Anecdotal accounts and some quantitative research²¹ suggest that state and local spending on population-based primary prevention activities is extremely limited.²²

FIGURE 5 | Median Annual per Capita Local Health Department Expenditures, by State, 2008



- \$50.00+
- \$40.00–49.99
- \$30.00–39.99
- \$20.00–29.99
- < \$20.00
- No data – No LHDs in Hawaii and Rhode Island; None or insufficient data for Delaware, Maine, Nevada, and South Dakota.

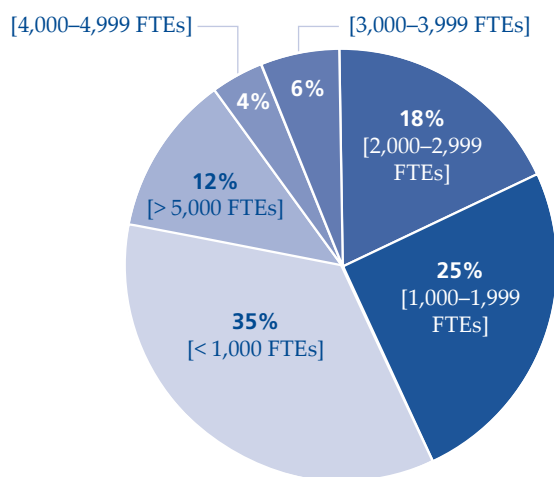
Note: $n = 2,097$. Medians for Georgia, Indiana, Massachusetts, New Mexico, and Texas based on low response rate (44 percent to 60 percent) from local health departments in these states.

Source: National Association of County and City Health Officials, 2008 National Profile of Local Health Departments, July 2009, p. 18; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.

WORKFORCE

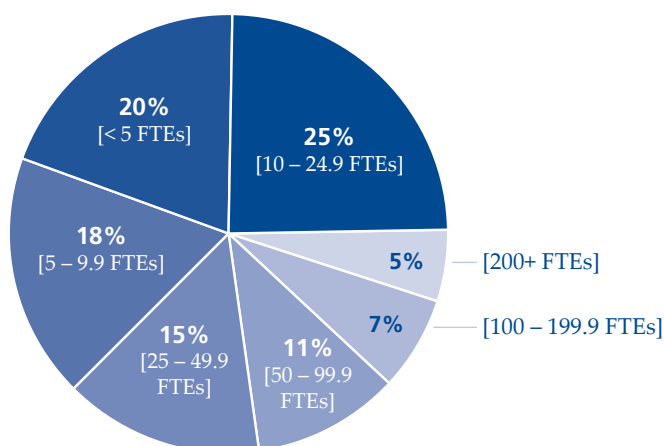
Information on the public health workforce shares many of the same data limitations that compromise estimates of public health financing, but these problems are further compounded by the lack of a standard taxonomy for public health occupations, as well as diverse approaches to credentialing public health professionals. The Bureau of Labor Statistics has identified nearly 100 job classifications that represent the different types and levels of public health

FIGURE 6 | Percentage Distribution of State Health Agencies, by Number of FTEs Employed, 2007



Source: Association of State and Territorial Health Officials, *ASTHO Profile of State Public Health*, vol. 1, p. 38; available at www.astho.org/Display/AssetDisplay.aspx?id=2882.

FIGURE 7 | Percentage Distribution of Local Health Departments, by Number of FTEs Employed, 2008



Note: $n = 2,205$. Due to rounding, percentages do not add to 100.

Source: National Association of County and City Health Officials, *2008 National Profile of Local Health Departments*, July 2009, p. 30; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.

workers.²³ While many of these job classifications correspond to credentialed professions, such as medicine and nursing, specialized training in public health is often not a requirement for these credentials.

Staffing of public health agencies at the state level varies widely. In total, state public health agencies are staffed by just over 100,000 full-time equivalent workers (FTEs). Most states (60 percent) are staffed by fewer than 2,000 FTEs, as shown in Figure 6. It is important to note that these data include state employees working at the local level. These outstationed employees account for approximately half of the workforce in state health agencies.²⁴

Most local health agencies had fewer than 25 FTEs in 2008 (Figure 7). While these workers represent a variety of occupational categories, clerical workers and nurses predominate (23 percent and 21 percent of staff, respectively), together accounting for nearly half of all local health agency employees. Local health departments have experienced staff reductions in recent years. The National Association of County and City Health Officials (NACCHO) estimates that staffing in local health departments has decreased by 15 percent since 2008.²⁵

The size and mix of the workforce in local health agencies varies by the size of the population served,

as shown in Figure 8. Not surprisingly, larger local health agencies tend to have larger staffs that represent a wider range of occupational disciplines. For example, epidemiologists and information systems specialists are typically found only in the largest local health agencies.

Public health professionals have cited the need for a more robust public health workforce that is larger, better trained, and more diverse (in terms of both the disciplines and the racial and ethnic groups represented). There is little consensus on the optimal size and composition of the governmental public health workforce, and the evidence base exploring how these workforce characteristics influence performance is extremely thin. One research study found that staffing levels in local public health agencies were not significantly associated with self-assessed performance for most essential services. However, in light of projected growth in the U.S. population, recent job losses, and the large proportion of the existing public

Figure 8 | Median Number of FTEs and Typical Staffing Patterns for Local Health Departments, by Size of Population Served

SIZE OF POPULATION SERVED		
10,000–24,999	50,000–99,999	100,000–499,999
8 FTEs, including:	31 FTEs, including:	81 FTEs, including:
1 Manager / Director	1 Manager / Director	5 Managers / Directors
3 Nurses	8 Nurses	17 Nurses
2 Clerical Staff	7 Clerical Staff	18 Clerical Staff
1 Environmental Health Specialist	3 Environmental Health Specialists	9 Environmental Health Specialists
	1 Nutritionist	3 Nutritionists
	1 Health Educator	2 Health Educators
	1 Emergency Preparedness Coordinator	1 Emergency Preparedness Coordinator
		1 Physician
		1 Epidemiologist
		1 Information System Specialist
		1 Behavioral Health Professional

Note: n ranges from 1,794 to 1,992 based on occupation. Numbers do not add to totals because listed occupational categories were not exhaustive of all local health department occupations.

Source: National Association of County and City Health Officials, 2008 National Profile of Local Health Departments, July 2009, p. 35; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.

health workers near retirement age, many experts have called for increasing training opportunities for public health professionals.²⁶

These recommendations focus not only on training more public health workers but also on improving the nature and quality of existing training programs. Proposed improvements include enhancing academic “pipe-line” programs that train future public health workers; expanding the implementation of workforce credentialing; and increasing the use of competency-based recruitment, assessment, and continuing education, as well as strengthening linkages between public health practice and academic institutions.²⁷ These proposals recommend that public health training should be grounded in an ecological perspective which recognizes that multiple determinants of health, such as social, economic, cultural, behavioral, environmental, and biological factors, interact to determine health outcomes.

PARTNERSHIPS

In expanding its role in health promotion and chronic disease prevention, the governmental public health infrastructure is challenged to play a leadership role in developing systemic interventions. Rather than simply implement a set of activities over which they have direct control, governmental public health agencies are increasingly being asked to broker broader societal change. While regarded by many experts as critical to future public health advances, the impact of such interorganizational engagement on public health system performance, workforce and budget requirements, and population health has not been well documented.

Descriptive data regarding these partnering relationships are more widely available. Most state and local public health agencies have established partnerships with other units of government (such as emergency response, education, transportation, parks and recreation, housing, and land use) and with private-sector organizations (such as universities, health care providers, businesses, faith communities, media outlets, and nonprofit organizations). However, the strength and vitality of existing collaborative relationships vary, both by jurisdiction size and type of partner organization. Local health agencies report that, while information exchange with these various stakeholders is common, formal agreements and resource sharing are much less prevalent.²⁸ Relationships with schools and health care–related organizations, such as hospitals and physician

practices, appear stronger than relationships with less traditional partners, whose missions may be less congruent with public health objectives.²⁹

Governmental public health agencies face numerous obstacles to building effective collaborative relationships. Models, such as the Turning Point Initiative and Mobilizing for Action through Planning and Partnership, have been developed to assist agencies in these efforts.³⁰ Despite the availability of these valuable guides, creating and sustaining public health partnerships remains a time-intensive undertaking that requires dedicated and sustainable resources, committed leadership, sophisticated communication skills, and the political license to engage in a range of public policy issues. Many governmental public health agencies lack one or more of these critical requirements. In some cases, nongovernmental partners may be better positioned to lead collaborative efforts.³¹

PERFORMANCE IMPROVEMENT AND CAPACITY ASSESSMENT

Public health agencies are increasingly using formal processes to evaluate their own performance and identify capacity development needs, but these efforts are usually focused on specific programs or activities. At the state level, structured assessment mechanisms include state health plan development, performance standards, and quality improvement (QI) techniques to monitor and improve public health services. Seventy-six percent of state health agencies report adopting a formal performance management program that includes performance standards, measures, monitoring, and QI processes. However, only 16 percent of states have fully implemented this type of systematic performance management agency-wide. Implementation of standards and/or QI for targeted programs is more common, with clinical programs more likely to employ performance standards and/or QI techniques than population-based or administrative functions.

Similar types of performance improvement efforts have been launched at the local level. Most local health agencies (55 percent) report that they engage in some type of formal performance assessment. Customer satisfaction surveys are the most common method reported (76 percent), but evaluation of management practices (63 percent), public health capacity (62 percent), and information systems (59 percent) are also prevalent.³²

Despite collaborative efforts among some state and local health officials,³³ existing public health quality improvement activities are diverse and have yet to yield a truly representative, nationwide assessment of performance and capacity development needs. As described earlier, the evidence base surrounding the relationships between structural characteristics of governmental public health agencies and system performance is limited.

In an attempt to provide a more uniform, comprehensive approach to monitoring and improving governmental public health, a national accreditation program for state and local health agencies is currently being developed. Administered by the Public Health Accreditation Board (PHAB) with financial support from the CDC and the Robert Wood Johnson Foundation and designed in close collaboration with the Association of State and Territorial Health Officials, NACCHO, and the American Public Health Association, the public health accreditation program is expected to launch in 2011. Accreditation standards and protocols are now being beta-tested in 19 local, eight state, and three tribal health departments. Compliance with accreditation standards will be assessed by PHAB site visitors. The accreditation program will be voluntary; NACCHO reports that a majority (54 percent) of local health agencies intend to seek accreditation.

CONCLUSION

The role of state and local health departments in implementing PPA-CA's public health provisions and their ability to take on the challenges related to this role remain open questions. A comprehensive assessment of health promotion and disease prevention capacity has yet to be conducted but, in light of the variability endemic to public health practice, such capacity is almost certainly uneven across states and communities. State and local health agencies appear to face a variety of obstacles to forging and maintaining productive collaborative relationships with other units of government, private-sector stakeholders, and even the communities they serve. Future returns on federal investments in community-based prevention may depend on how successful state and local health departments are in cultivating these interorganizational partnerships.

ENDNOTES

1. HealthCare.gov, “Affordable Care Act: Laying the Foundation for Prevention,” fact sheet, undated; available at www.healthcare.gov/news/factsheets/aca_laying_the_foundation_for_prevention.html. On July 8, 2010, a Centers for Disease Control and Prevention (CDC) funding announcement solicited applications from the states, the District of Columbia, nine large metropolitan health departments, and federally recognized tribal governments for \$42.5 million in funding for public health infrastructure development, with an emphasis on performance management.
2. Thomas R. Frieden, “Asleep at the Switch: Local Public Health and Chronic Disease,” *American Journal of Public Health*, December 2004, 94, no. 12 (December 2004): pp. 2059–2061.
3. Some would argue that preparedness-related activities have actually undermined public health’s ability to address more prevalent health problems by diverting energy and funding away from nascent interventions to reduce the behavioral, social, and environmental risks associated with these diseases.
4. Institute of Medicine (IOM), *The Future of Public Health* (Washington, DC: National Academies Press, 1988; available at www.nap.edu/openbook.php?isbn=0309038308).
5. IOM, *The Future of the Public’s Health in the 21st Century* (Washington, DC: National Academies Press, 2002); available at www.nap.edu/openbook.php?isbn=030908704X.
6. IOM, *Future of Public Health*, pp. 40–41.
7. The committee included representatives of the American Public Health Association, the Association of Schools of Public Health, the Association of State and Territorial Health Officials (ASTHO), the Environmental Council of the States, the National Association of County and City Health Officials (NACCHO), the National Association of State Alcohol and Drug Abuse Directors, the National Association of State Mental Health Program Directors, the Public Health Foundation, and the U.S. Public Health Service (Agency for Health Care Policy and Research, CDC, Food and Drug Administration, Health Resources and Services Administration, Indian Health Service, National Institutes of Health, Office of the Assistant Secretary for Health, and Substance Abuse and Mental Health Services Administration).
8. See Sarah A. Lister, “An Overview of the U.S. Public Health System in the Context of Emergency Preparedness,” Congressional Research Service, Order Code RL31719, 2005; available at www.fas.org/sqp/crs/homesec/RL31719.pdf.
9. NACCHO, *2008 National Profile of Local Health Departments*, July 2009, p. 11; available at www.naccho.org/topics/infrastructure/profile/resources/2008report/upload/NACCHO_2008_ProfileReport_post-to-website-2.pdf.
10. Glen P. Mays *et al.*, “Public Health Delivery Systems: Evidence, Uncertainty, and Emerging Research Needs,” *American Journal of Preventive Medicine*, 36, no. 3 (March 2009): pp. 256–265.
11. ASTHO, *ASTHO Profile of State Public Health*, vol. 1, p. 19; available at www.astho.org/Display/AssetDisplay.aspx?id=2882.

12. National Association of Chronic Disease Program Directors, "State Success Stories"; available at <http://chronicdisease.org/i4a/pages/index.cfm?pageid=3299>.
13. CDC, "State and Program Examples"; available at www.cdc.gov/chronicdisease/states/examples/index.htm.
14. NACCHO, *2008 National Profile*. These data are for all local health departments, regardless of organizational model.
15. NACCHO, *2008 National Profile*, p. 52; author's calculation based on weighted averages by size of local health agency.
16. One study estimates that only about 15 percent of the observed differences in local health department spending are attributable to differences in service scope. Among service types, the provision of a broad range of clinical prevention services and medical treatments is most strongly predictive of higher spending levels. The provision of population-based services, such as primary prevention, regulatory functions, and environmental health, was not statistically associated with variation in total spending. An additional 8 percent of the variation in spending by local health departments can be attributed to structural agency characteristics. Operating as a decentralized public health authority and having a local board of health were both predictive of higher spending. Another 8 percent of variation in spending is associated with differences in population characteristics, with income per capita and location in a metropolitan area inversely associated with higher spending by the local health department. Importantly, over two-thirds of the variation in local health department spending remains unexplained by this research. Unmeasured factors that may account for these differences include the intensity and quality of services provided, organizational efficiency, and leadership effectiveness. See Glen P. Mays and Sharla A. Smith, "Geographic Variation in Public Health Spending: Correlates and Consequences," *Health Services Research*, 44, no. 5, part 2 (October 2009): pp1796–1817; available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1475-6773.2009.01014.x/pdf>.
17. ASTHO, *Profile of State Public Health*, p.26.
18. Trust for America's Health, "Shortchanging America's Health: A State-by-State Look at How Public Health Dollars Are Spent and Key State Health Facts," March 2010, p. 8; available at <http://healthyamericans.org/assets/files/TFAH2010Shortchanging05.pdf>.
19. NACCHO, *2008 National Profile*, p. 18.
20. K. Eilbert *et al.*, *Measuring Expenditures for Essential Public Health Services* (Washington, DC: Public Health Foundation, 1996); available at www.phf.org/reports/Expend1/Measuring_Expenditures_for_Essential_Public_Health_Services.pdf.
21. Association of State and Territorial Chronic Disease Directors, "Chronic Disease Burden and Expenditures in the United States: A Report from State and Territorial Health Agencies," November 2004; available at www.chronicdisease.org/files/public/StateExpendituresReportDraft112904.pdf.
22. Beth E. Meyerson and Lisa K. Gilbert, "Show Me the Money: State Contributions Toward STD Prevention," *Journal of Public Health Management and Practice*, 16, no. 3 (May/June 2010): pp. 232–239.

23. Population-based prevention activities are often financed in large part with federal funds through the CDC. On a per capita basis, the funding provided by CDC for prevention activities varies widely across states. Many states use these limited resources to develop state-wide programs and distribute few to no resources to local health agencies. When funds are passed through to local health departments, competitive mini-grants are often used to distribute the funds. Small local health departments report difficulties accessing these funds because of staff and infrastructure limitations. (Michael Meit *et al.*, "Rural Public Health Financing: The Relationship Between Infrastructure and Local Program Funding," NORC Walsh Center for Rural Health Analysis, Policy Analysis Brief, W series, no. 14 (June 2008); available at www.norc.org/NR/rdonlyres/80F3DBDD-F01C-48CA-8331-1F736ECA8AC7/0/PolicyBriefRuralPublicHealthFinancingJune2008.pdf. Funding constraints for chronic disease prevention are not limited to small local health agencies. One 2005 survey of the 17 largest metropolitan local health agencies found that on average these agencies devoted less than 2 percent of their total budgets to chronic disease prevention, with about half of these funds focused on tobacco. Source of funding varied considerably across cities. In some cities, such as New York and Detroit, most chronic disease program funding came from local sources. In other cities, such as Los Angeles, state funding (which included federal pass-through dollars) predominated. Only in Baltimore and Boston did direct federal funding account for the majority of chronic disease program budgets. See Mari Georgeson *et al.*, "Shortchanged? An Assessment of Chronic Disease Programming in Major US City Health Departments," *Journal of Urban Health*, 82, no. 2 (2005): pp. 183–190.
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25. Data published by ASTHO do not report public health staffing by state or on a per capita basis.
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30. Glen P. Mays *et al.*, "Understanding the Organization of Public Health Delivery Systems: An Empirical Typology," *Milbank Quarterly*, 88, no. 1 (March 2010): pp. 81–111; available at <http://onlinelibrary.wiley.com/doi/10.1111/j.1468-0009.2010.00590.x/pdf>.
31. Information about the Turning Point program is available at www.turningpointprogram.org/Pages/about.html. Information on the Mobilizing for Action through Planning and Partnership process is available at www.naccho.org/topics/infrastructure/mapp/index.cfm.
32. Stephen M. Padgett *et al.*, "Turning Point and Public Health Institutes: Vehicles for Systems Change," *Journal of Public Health Management and Practice*, 11, no. 2 (2005): pp. 116–122.

33. NACCHO, *2008 National Profile*, p. 77.

34. The Multistate Learning Collaborative, funded by the Robert Wood Johnson Foundation, brought together public health officials from five states to share their performance assessment and improvement processes.